

# Daily GLOWBUGS

## Digest: V1 #98

via AB4EL Web Digests @ SunSITE

Purpose: building and operating vacuum tube-based QRP rigs

[AB4EL Ham Radio Homepage @ SunSITE](#)

%%%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%%

**Subject: glowbugs v1 #98**  
**glowbugs**      **Thursday, August 28 1997**

**Volume 01 : Number 098**

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**Date:** Tue, 26 Aug 1997 22:46:40 -0500  
**From:** "John Kemker" <kemkerj@xyzzy.net>  
**Subject:** Intro

Sometime back in 1975-1976, I became interested in ham radio through a friend of my dad's, Mike Blair (currently N4MB). Mike had a beautiful hamshack in Houston, complete with RTTY, CW, SSB and all sorts of other stuff. I remember Mike taking me for a drive in his car so he could show me his 2-meter mobile and had a blast as he accessed a repeater's autopatch and called my house from his radio.

I started to hang around an electronics store that carried quite a bit of ham radio and discrete parts for the experimenter in Bellaire, TX. I'd ride my bike to downtown Bellaire and hang around the music store, the used record store and the electronics store, all right next to each other on the square in Bellaire.

I bought a 1976 ARRL handbook and I remember reading it over and over and over again, dreaming of building these neat projects inside. Mike started teaching a ham radio class and I remember going to one class, but not being able to finish for some reason or another.

As the years went by, I got involved in a few other things, including model rockets, computers, girls, etc. In 1979 I moved with my parents to Atlanta, GA. I got into high-end audio, becoming enamored with the warm sound of tubes.

After becoming a BAR (Born-Again Rocketeer) in 1989 and getting into high-power rocketry, I became quite involved in rocketry. As Prefect of Tripoli Atlanta Rocketry Association, one of our members suggested to me that we hold a ham radio class so we could do ATV on the rockets.

Tad, K3TD, taught the class and I went to every single one. In November, I earned my Technician class license. My first purchase as

a new ham was a World Radio Labs TomCat 6a transceiver. Here was a glowbug rig that was as old as I am.

The TomCat needs a little work, but it should be fixed within a few months. Last month, I picked up a beautiful Heathkit HW-29 Sixer. This is the original HW-29, not the HW-29a model. A final tank coil is on its way to me and I should be able to start working some 6m AM pretty soon. I've already tested the RX and it works great, having copied some QSOs on 50.400 after the Monday night Southeast 6m Sideband net.

Last month, I finished up earning my SMIRK number and am now working towards earning my SMIRK 100 and VUCC on 6m.

73!

=====

73 de KF4MZD (John Kemker)  
kemkerj@xyzzy.net  
Grid Square: EM73vt  
QRP-L Number: 974  
SMIRK Number: 6185  
TRA #2499, TARA #002

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Date: Wed, 27 Aug 1997 02:22:46

From: kc5gxl@pnx.com

Subject: Re: Intro

Hello all;

My name is Dan and the qth is Orange, Texas. I have been interested in amateur radio ever since listening to Sputnik as a kid. I used to wonder about the funny sounding code that was around the band as I tried to find another shortwave station. Finally found out it was the Morse code. Only been a ham since 1994 when I got a tech + license. In less than 1 year, I made extra. I am a VE tester with ARRL, and have been president of the local ham club for the last 2 years. I have always liked tube type radios but presently have no projects in the fire. I have been a member of this list for about a year or so and enjoy all the construction tips and advice.

Keep up the good work and I will keep listening to what you all have to say.

Just my 1/3 cent's worth. Ah, the unmistakable smell of tubes warming up!

73, de kc5gxl aka Dan

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Date: Tue, 26 Aug 1997 23:34:11 +0000

From: "Robert Nickels" <ranickel@mwc1.net>

Subject: Intro

Hi All,

I'm Bob Nickels - W9RAN - ex KE0T, WA0OHO -and I'm an engineering manager for Honeywell's Micro Switch division here in Freeport IL. My story is mainly one of any number of "trigger events" that led me down the path I find myself on...

Like the two 1963 issues of Popular Electronics a family friend gave me at age 12. You know, the ones with the "How To Become a Ham" articles. The "Fox Hole Radio" my Dad and I made from the Popular Science "Boys Fun Book". All the 1.5 volt telephone batteries a neighbor provided for my many attempts to one-up Alex G. Bell. The Webster wire recorder that ended up jamming on one big mass of "square-knot" wire splices. All the attempts to replicate the cool-looking articles in the electronics magazines using "substitute parts" from old TVs and my erector set. Or the Spacephone walkie-talkies hooked to a 60" whip on my bike...

Suffice it to say that I became nuts about radio - an affliction I've grown comfortable with. I'm not fussy - if it concerns radio, I like it! Things started to get serious by about age 14, after a frustrating attempt to learn the code from the blinking light bulb on a Knight Kit code practice set in our Boy Scout troop. I sought out a local ham - Jack WA0BOK of Benedict Nebraska, who sadly became SK early this year. He showed me his homebrewed 6 meter 2 watt rig that worked Puerto Rico. He showed me that my SX-110 and HT-40 could work the world and he showed me the Blue Valley Radio Club in Seward, NE, where I got my license a few months later...

Reading your stories has made me stop and think how lucky I was to find good "Elmers", and to have a Pop (WA0OHP) who would haul me to radio club classes, help me build a Span Master kit on Christmas Day, and let me abuse his tools on my latest project. And always encouraged me.

Through the years...

Those nail-biting trips to Omaha for the General, Advanced, and 3rd and 1st Phone. Convincing an otherwise sane-looking businessman to allow me to take over the controls of his 500 watt radio station. Row after row of radios in the WRL showroom. Running the Nebraska Storm Net on my "new" NCX-3. Phone patches to my folks from college. Getting wrapped up in new jobs, marriage, moving, job promotions, divorce. Getting bored with ham radio, then rediscovering that "real radio" is just as much fun as it ever was!

Collecting and restoring vintage gear isn't new for me, but it's definitely taken an uptick over the past 6-7 years. The "collection" reflects all the same old interests - old magazines and paper, broadcasting, recording, homebrewing, and of course Boatanchors. I like the Glowbug group because there's still nothing like tweaking up the old Span Master or homebrew regen on a cold winter night, or working cross country on 50.4 AM. For me "voices from the ether" will always be magic!

73, Bob W9RAN

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Date: Wed, 27 Aug 1997 01:02:44 -0400  
From: benb27@juno.com (Ben C Bradley)  
Subject: Intro/Query: permeability tuned receiver

My name is Ben Bradley, an electronic/software engineer for close to two decades, and this is my new, non-work-related email address. I've

been lurking on the Glowbugs and Boatanchors lists for over a year, and have posted every once in a while.

I've been interested in electronics and ham radio since my dad was an active ham when I was growing up in the '60's. I've yet to really learn the code and get a license, but barring my other hobbies and interests taking all my time, I hope to rectify those within a year or so. I plan to run my second half-marathon this Thanksgiving - maybe I can listen to some code tapes while on training runs, or even during the actual race - last year's time was a snail-blazing 2:55.

A somewhat BA/GB-related hobby is book collecting - in my collection are (among other things) hundreds of technical books. Recently in an antique/flea market I saw a book with the ARRL logo, and was disappointed to find it was only an old (early '60's) ARRL license manual -- it was mildly interesting from a historical perspective, but it seemed useless to have a book full of out-of-date regulations. Until I paged towards the back - advertisements for boatanchors! It has pages of ads in the back, just like the old ARRL handbooks, so I decided it was well worth the 50 cents or a dollar flea-market price.

I've collected a few glowbug supplies from hamfests in the last year, and maybe this winter I'll find the time to put something together. I got a couple of IBM AT computers from a surplus sale at work, and I think one's case would make a good receiver cabinet/chassis. I've got a 'three-gang' variable tuning coil, moved by a three-turn helical drive that a CD could be mounted on for a dial. I've got this CD that says 'Windows 95' that I could use...

Does anyone have any ideas for, or especially any info on, permeability-tuned receivers? The only one I've ever seen or heard of was a Heath FM-only tube broadcast radio. A schematic of an actual working one would be great. I don't know how well such a receiver would work, but I plan to build one regardless.

For BA/GB related equipment, I've got HQ-100 working, SX-42 mostly working, an S-38 that I've taken apart and looked into but haven't spent the time to get it working, a few Tek scopes in various conditions, and several pieces of 'small' test equipment from Heath (sig gen), Eico (cap checker) and others of that ilk. And whenever I need a scope probe and a direct wire isn't good enough, I get a connector, coax, resistors and a trimmer cap and make my own, as I described recently on Boatanchors.

Other interests - I've mentioned running - I've just done my fourth sprint triathlon, and I'm training for my first olympic-distance tri that's only a few weeks away. There's playing music - a few years ago I made a nylon-string acoustic guitar. The sound isn't outstanding, but it does play in tune - I knew just where to put the frets and bridge. I do want to do more guitarmaking (the actual word is lutherie).

I suppose all these other hobbies explain why I don't post often, haven't learned the code and don't have a ham license. And these interests would be in real trouble if I were married...

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Date: Tue, 26 Aug 1997 23:51:38 -0700  
From: "Scott Alfter" <salfter@ibm.net>  
Subject: Re: HV Windings

> This is the FIRST message I have received from GLOWBUGS in over three  
> weeks!

For me, the list was dead for more than just three weeks...until a week or

so ago, I hadn't received anything in about two months! Since I had switched ISPs at about that time, I began to wonder if my subscription requests had ended up in the bit-bucket.

/ \  
 / v \   
(IIGS( Scott Alfster (salfter@ibm.net)  
\^/ http://www.geocities.com/Area51/Corridor/6595

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**Date:** Wed, 27 Aug 1997 01:06:21 -0700  
**From:** "Scott Alfster" <salfter@ibm.net>  
**Subject:** Re: intro

"Lawrence R. Ware" <lrware@pipeline.com> wrote:  
>no ham ticket, although I have been sorta trying to pick up morse...

I was beginning to wonder if I was the only non-ham on this list. :-)

I think the "bug" for tube stuff first bit me when I was browsing through the Radio RT on GEnie a few years back (got an idea that packet radio might be better than landline comms through modems). I acquired a non-working RCA X-551 AM receiver and a Precision 920 tube tester from one of the participants there and brought that back to life. From another GEnie user, I acquired a Hallicrafters S-120. Didn't need to do anything to get it working about as well as they're said to ever work (that is, it's deaf above about 11 MHz or so).

Current projects, as time permits, are to fix up a Zenith H723 AM/FM receiver (mostly cosmetic this time, but it'd be a good idea to get rid of the "wax firecrackers") and a homebrew 14F7 regenerative receiver (tried a 1S4/3S4 design once, but didn't get it to work...I think I had screwed up some filament connections). I've also fired up a Morse-code practice program on the trusty old Apple IIGS on and off...have gotten through about a third of the lessons so far, covering 18 letters. With two jobs and school, though, I don't know if I'll ever get to finish. I also wrote a program for the II to practice for the Novice and Technician exams. I could probably get a Technician license tomorrow if I wanted, but I'm shooting for Technician Plus as a "starter" license.

Other interests are old computers...especially Apple IIs (have a IIGS that I upgraded from the IIe my parents bought new in '85 and a IIe that I picked up really cheap at a garage sale a while back), but I've also picked up a Tandy Color Computer 2, a Commodore VIC-20, and an IBM PC/XT that various people either had sitting in their closets or that they were going to throw out. Maybe I'll make a museum out of them 50 years down the road. :-) I think what'd be really neat, though, would be to homebrew some kind of computer equipment out of discrete components. A "tube computer" would probably be unfeasible because you'd need your own electrical substation to operate it :-), but something built out of those three-legged bits of sand called "transistors" might be doable.

As for education, I'm working toward a BSCS at UNLV, one course at a time (have just a statistics course and a handful of 400-level CS courses before I'm done). In the meantime, I sell computers at Best Buy and books at one of the local college bookstores to pay the bills.

(I should probably be practicing Morse with QSO Kid instead of writing this missive, but it's been eons since I've seen any considerable amount of traffic on this list. :-) )

/ \  
 / v \   
(IIGS( Scott Alfster (salfter@ibm.net)  
\^/\_ http://www.geocities.com/Area51/Corridor/6595

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Date: Wed, 27 Aug 1997 08:44:48 -0400  
**From:** "Forrest B. Snyder, Jr." <fbsnyder@mitre.org>  
**Subject:** Introduction

Greetings!

I first got bit by the radio bug as a kid in high-school in the early = '60s. Read every copy of Pop-tronics I could get my hand on, = practically memorized "How to Become a Radio Amateur, and drooled over = the neat rigs I read about in the Allied, BA, and Lafayette catalogs." = I was, unfortunately, blessed with large plans and a very small pocket = book -- after saving for about a year I ordered and assembled a = Lafayette KT-200 (aka "nine-tube Trio") general coverage receiver from a = kit. (I still have it and it still works!)=20  
I spent a lot of time listening before radio took a back seat to = college, marriage, and twelve-years in the US Army (Field Artillery and = Army Aviation). =20

My interest in radio was re-awakened when one of my friends offered a = licensing class in 1987. My first call, issued in Sep 87, was KC4HMQ. = However, by the time I got on the air in Feb 88, I had upgraded from = novice to technician and issued present call of N4UTY. Have since = upgraded to Extra. My first QSO and 90% of the rest of them are CW, = usually with a straight key. =20

First rig was a Yaesu FT-101E -- lots of fun, but somehow not quite what = I had dreamed of. Traded the Yaesu for and ICOM 728 that I use for both = QRP at 4 1/2 watts and QRO at up to 100. I have worked SSB, but mostly = keep the mike stored in a drawer and pound away with a straight key or = (mechanical) bug. My favorite on-the-air activity is probably CW = rag-chewing at slow speed with the lowest power. =20

Since I got licensed, I have rehabilitated a Viking II (had to replace = an open screen dropping resistor) which I sold. Used the proceeds to buy = a Johnson Adventurer -- a really sweet little rig that I currently pair = up with a borrowed BC-348-R. I also play around some with a borrowed = HW-9. My antenna is a center-fed 40M Zepp between two trees. I'm still = amazed at how little you need to communicate effectively.

Maybe one day I'll write a book entitled "Around the World on Fifty = Watts and a Wire".

Forrest B. Snyder, Jr.  
MITRE -- W118  
fbsnyder@mitre.org  
Voice: 703-695-9999  
Voice Mail: 703-883-7665

**Date:** Wed, 27 Aug 1997 06:33:19 -0700 (MST)  
**From:** Chris Trask <cstrask@primenet.com>  
**Subject:** Re: Permeability Tuned Receiver

On Wed, 27 Aug 1997, Ben C Bradley wrote:

<EL SNIPPERINO>>

> Does anyone have any ideas for, or especially any info on,  
> permeability-tuned receivers? The only one I've ever seen or heard  
> of was a Heath FM-only tube broadcast radio. A schematic of an actual  
> working one would be great. I don't know how well such a receiver  
> would work, but I plan to build one regardless.  
>

Ben,

You may be interested in an upcoming article in Applied Microwave and Wireless that I've written, entitled "Transductors: The Forgotten Variable" which is about incremental permeability tuning.

Regards,

Chris

If you understand it,  
then it's obsolete!

Circuit Design for the  
RF Impaired

Chris Trask / N7ZWY  
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Technical Editor,  
QRP Quarterly  
QRP ARCI 9464

Email: ctrask@primenet.com

Graphics by Loek Frederiks

**Date:** Wed, 27 Aug 1997 09:42:02 -0500 (CDT)  
**From:** linscot@is.rice.edu (Steve Linscott)  
**Subject:** Re: Permeability Tuned Receiver

>On Wed, 27 Aug 1997, Ben C Bradley wrote:  
>

>

>> Does anyone have any ideas for, or especially any info on,  
>> permeability-tuned receivers? The only one I've ever seen or heard  
>> of was a Heath FM-only tube broadcast radio. A schematic of an actual  
>> working one would be great. I don't know how well such a receiver

>> would work, but I plan to build one regardless.

I didn't see your original post, but the Collins R-390 family have to be the classic examples of permeability-tuned receivers.

73 de W5EGP

- Steve -

\*\*\*\*\*  
\* Steve Linscott Divisional Consultant Natural Sciences \*  
\* Rice University 6100 South Main Street Houston, Texas 77005-1892 \*  
\* Phone: (713) 527-4985 FAX: (713) 527-6099 Email: linscot@rice.edu \*  
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Date: Wed, 27 Aug 1997 11:00:14 -0400  
**From:** "Brian Carling" <bry@mnsinc.com>  
**Subject:** Re: Junk Box Challenge!

We'll all pitch in and donate some of the parts you don't have!

For some possible GB projects, take a look at my web page:

<http://www.mnsinc.com/bry/hamfiles.htm>

I've added a few good new ones!

Bry, AF4K

On 26 Aug 97 at 9:14, Claton Cadmus wrote:

> I've got an idea to boost the list activity a bit.  
>  
> This Friday I will inventory and post a list of the glowbuggy odds and  
> ends I have around the shack here. These will be items I have in surplus  
> to any other projects I have been contemplating. From that list we, as a  
> group, will design a glowbug rig of some sort. There will of course be the  
> need for a few parts not available from the list. The limit on outside  
> purchases will be 20 bucks.  
>  
> Now I'm sure there will be multiple suggestions as we get started,  
> decisions on the direction to go, which project to pursue, will be mine.  
>  
> I hope there is enough of you interested that this can be a fun exercise.  
>  
> Keep an eye on the list Friday.  
> ----  
> 73 de KA0GKC Claton Cadmus  
> E-mail [cla@spacestar.net](mailto:cla@spacestar.net)  
> If you live in Minnesota check out this webpage!  
> <http://www.spacestar.net/users/aplitech/mnqrp/>  
>  
>

```
*****
*** 73 from Radio AF4K/G3XLQ Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com *
*** See the interesting ham radio resources at: *
** http://www.mnsinc.com/bry/ *
*****
AM International #1024, TENTEN #13582. GRID FM19
Rigs: Valiant, DX-60/HG-10, Eldico TR-75, Millen 90810
FT-840, TM-261, Ameco TX-62, Gonset Communicator III
HTX-202...TEN-TEN #13582, DXCC #17,763 Bicentennial WAS
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**Date:** Wed, 27 Aug 1997 09:02:44 -0600  
**From:** Dexter Francis <cwest@xmission.com>  
**Subject:** Address change

I have changed e-mail providers.  
Please update the list-server with my new address.

tnx

- -df

- -----Visit our Web site at-----  
<http://www.xmission.com/~cwest/>  
or e-mail to: tubes@usa.net

---

**Date:** Wed, 27 Aug 1997 10:02:53 -0500  
**From:** bill@skeeter.frc0.com (William Hawkins)  
**Subject:** Re: Permeability Tuned Receiver

You could also learn about the ultimate permeability tuned receivers -  
the military R-390 family (R-388 to 392, some with A's) designed by  
Collins.

Permeability tuning was also used for car radios, probably for small  
space and vibration considerations.

Regards,  
Bill Hawkins

---

**Date:** Wed, 27 Aug 1997 10:43:51 -0700  
**From:** Ron Thomas <rthomas@gulf.net>  
**Subject:** Intro (long)

Hi gang,

I'm Ron Thomas, N4RT, and I am an electrical engineer for Boeing. I am

currently working in Fort Walton Beach, FL on the USAF AC-130U gunship program (Special Ops).

My interest in amateur radio began at about the age of eight when I used to watch my Uncle and one of his friends operate his Viking II and SX-99 from my Granfather's house in Jasper, Alabama (my home town). I was fascinated with all the dials, knobs, and switches, and especially fond of the red and green jewel lights on the front of the old Viking II. I frequently got into trouble with my Uncle when I would sneak into his shack and twist all the knobs... naturally, it took a while to retune that old Viking when they wanted to get back on the air!

About the age of 12, I was in the Boy Scouts studying for my "First Class" badge and part of the requirement was to know Morse code. Not having an audio oscillator to practice with, my Uncle helped me learn the code by whistling the alphabet and numbers to me when we would go somewhere in his car. At one point, he remarked that I probably knew the code well enough to get my "ham ticket". Of course, I knew what ham radio was all about from watching him and his friend... but I never thought that I could actually become a ham myself!

He got his friend, "Sandy" Sanders (W4GMU), to give me the Novice test and I was thrilled when I passed. I still remember how he sent me some "warm up" text from his daughter's science book. He used an old Ameco code oscillator and the text he sent was "A candle doesn't look as though..." then he stopped. I had copied it solid at 5 wpm so there was no need to do the "real" test. He had tricked me, but I would have been so much more nervous if I had thought I was taking the "real" test and he knew this. This was one of my first encounters with a good elmer... and I have been a dedicated CW operator ever since. Interestingly, although my Uncle bought a station and had Sandy come over and operate it for him... he never got his ticket! He was always very proud of me for getting mine. Before he died, he did see one of his sons also get his ham license. My novice call was KN4TRJ.

I moved quickly from novice to general. The test was given every six months at the Post Office in Birmingham, AL. There was usually a crowd and a kind of "hamfest" atmosphere at these tests... and a lot of fellows failed but never gave up and kept coming back again and again until they passed. I was only about 14 when I took the general class exam and flunked the theory the first time around. I had no problem with the code. Most of the older fellows had the opposite problem... no trouble with the theory but problems with the code. On the second try, I passed and became K4TRJ. After two years I took the Extra Class exam and at the same time I took the First Class Radio Telephone and Second Class Radio Telegraph commercial licenses. I was sixteen when I got my first job at one of the local broadcast stations (taking meter readings every half hour at the transmitter) because I had a First Phone ticket. When incentive licensing rolled around I already had an Extra ticket, so I was able to apply for a two letter call and got my initials. I wasn't real happy with the "N" prefix at first, but it was great on CW so I kept it.

At age 17 I graduated from high school and enlisted in the Navy. After boot camp I was sent to the Naval Air Technical Training Center in Memphis, TN and went through the Aviation Electronics Technician "N" (Navigation and Communications) course.

At my first duty station (NAS Jacksonville, FL) my leading chief found

out I could copy CW and asked me if I wanted to fly since our squadron was short of radio operators. I was thrilled to qualify as a radio op on Navy SP-2E "Neptune" anti-submarine patrol aircraft and spent the next year tracking submarines in the Caribbean. In 1966, Vietnam had become a full blown war and I got transferred from Jacksonville to fly with a transport squadron out of Barber's Point, Hawaii. The planes we flew were old Air Force C-118s the Navy inherited... and we flew primarily low priority cargo like mops, brooms, radar parts, etc. across the Pacific into Danang. When we weren't hauling cargo we were hauling passengers. The trip to Danang and back to Hawaii took us about two weeks with many interesting overnight stops on islands all across the Pacific including the Philippines and Japan.

Tiring of the long, boring hours of mostly listening to static crashes on HF freqs for 13-14 hours at a time, I decided to get out of the Navy at the end of my enlistment. My leading Chief talked me into applying for a Navy college program since going to college was what I intended to do when I got out. "Let the Navy send you to school" he said, and in 1968 I was selected for the Navy Enlisted Scientific Education Program (NESEP). Four years later, I graduated from Auburn University with a BEE and received a commission as an Ensign.

After completing flight training at NAS Pensacola, FL and earning my wings in 1972, I found myself again off the coast of Vietnam this time aboard the aircraft carrier USS MIDWAY (CV-41). I was flying as an air intercept controller in the Grumman E-2B "Hawkeye" airborne early warning aircraft. My ground job was Avionics maintenance officer which I really enjoyed and all the "tweets" in the squadron worked for me... several of which were hams! We had lots of fun in spite of being a long way from home and our families. Ham radio activity while deployed in a combat zone was strictly verbotten. However, there were some occasional early morning ops checks of the E-2 HF gear from the flight deck which "might" have strayed onto 20 meters (grin). Purely accidental, of course!

I retired from the Navy in 1985 and began my "second" career as an engineer. I've worked as a systems engineer in a shipyard, RF engineer in Germany, and as a design engineer integrating avionics systems into various military aircraft. I even found myself in Saudi Arabia during "Desert Storm" doing avionics mods on USAF Special Ops helos. I even have a piece of a SCUD missile as a souvenier from that adventure.

I owe every success I've had to the firm foundation I was provided by the many "elmers" who helped this young kid of 13 in those early novice days of amateur radio! I can only hope that I can give back to the fraternity some of the joy and pleasure that has come my way via this fascinating hobby.

Now, I'm forever smitten by glowbugs and the boatanchor bug. In addition to several modern "sand state" rigs, I have acquired the following:

Collins S-Line (WE)  
National HRO-60 & all coils  
Hallicrafters HT-37, SX-111, SX-99  
Johnson Viking II, Valiant, Ranger II, 122 VFO  
Globe Chief and Scout (680A)  
RME-4300  
Gonset G-76

Hammarlund HQ-110  
GRC-109 and a couple of ARC-5s  
Central Electronics 20A & VFO  
Swan 240, 350C, & power supplies  
Various Heathkit, homebrew, and other misc. treasures

I continue to gather "bargains" at hamfests and am stocking up on all the spare tubes I need to keep these rigs on the air for years to come. I don't have them all "restored" yet and some are not fully "operational", but they will all be on the air one day. I appreciate this list and all the fellows who share their experience with repairs, restorations, and simply making things "work" when lesser men would probably give up! Thank you all!!!

Warmest regards,

Ron Thomas N4RT  
(ex K4TRJ, KA2RT, JR1ZWO, DJ0MAW)

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Date: Wed, 27 Aug 1997 11:56:17 -0400  
**From:** "Brian Carling" <bry@mnsinc.com>  
**Subject:** Carbon mics & modulators

Want to try using a carbon mike?

Here is an example of how to use a carbon mike:

<http://www.mnsinc.com/bry/ham/m60.gif>

You can find many enjoyable old articles like this at:

<http://www.mnsinc.com/bry/hamfiles.htm>

Way down at the bottom of the page!

Enjoy - AF4K, Bry

\*\*\*\*\*  
\*\*\* 73 from Radio AF4K/G3XLQ Gaithersburg, MD USA \*  
\*\* E-mail to: bry@mnsinc.com \*  
\*\*\* See the interesting ham radio resources at: \*  
\*\* <http://www.mnsinc.com/bry/> \*  
\*\*\*\*\*  
AM International #1024, TENTEN #13582. GRID FM19  
Rigs: Valiant, DX-60/HG-10, Eldico TR-75, Millen 90810  
FT-840, TM-261, Ameco TX-62, Gonset Communicator III  
HTX-202...TEN-TEN #13582, DXCC #17,763 Bicentennial WAS

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Date: Wed, 27 Aug 1997 15:01:59 -0500  
**From:** launerb@crl.com (William H. Launer)  
**Subject:** Re: Permeability Tuned Receiver

On Wed, 27 Aug 1997, Ben C Bradley wrote:

>> Does anyone have any ideas for, or especially any info on,  
>> permeability-tuned receivers? The only one I've ever seen or heard

The typical solid-state auto radio is permeability tuned. Doesn't glow, but you might be able to get some ideas (maybe adapt the mechanical hardware, as well).

73, Bill wb0cld

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qrp-l #279        qrp arci #3551  
Grid Square EM48RT

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**Date:** Wed, 27 Aug 1997 18:01:18 -0700 (MST)  
**From:** Jeff Duntemann <[jeffd@coriolis.com](mailto:jeffd@coriolis.com)>  
**Subject:** Secret origins

QST glowbugs...

Unless I misrecall I did this once before, so I won't go on at my customary length. (I type at 110 wpm, so that can be a long length...)

Why me? Maybe it's genetic; my father was in AACs in Atar, Mauritania during the War, working a mill on receive and a Vibroplex bug on send. I bought a bug early on but never mastered it like my dad; I guess I'm just a straight key guy. We were going to get our licenses together, but he was a two pack a day man and got oral cancer while I was in high school just when I needed him the most and that was the end of that.

Like a lot of kids growing up in the late fifties, early sixties, I built things. Electronics and radios nabbed me when my best friend Art got an old radio from his Uncle George. It had no case, just a working chassis, with a dial pointer that moved back and forth, but no dial for it to point to. It had two shortwave bands (over and above AM BCB) and Art and I hooked it to thirty feet of wire strung out to a screw eye on the garage and spun the dial. We had no idea what frequencies we were listening to, and so the radio became a weird sort of telescope to a strange land, one inhabited by clumps of intelligence (SW broadcasts) amidst long stretches of wilderness harboring inexplicable creatures that made all kinds of weird noises. I'm still not sure what many were, but some were TTY, others beacons, and so on. I don't know why that experience took such a hold on me, but it did. We calibrated the radio with help from Uncle George, and then began building radios of our own.

Art never became a ham but I did, nabbing WN9MQY in May 1973 after several years of setting electronics aside to build telescopes. (The astronomy club at my high school sucked me in; my passions were many and fickle back then.) My first transmitter was homebrew, and while it wasn't very good (see the Mini-Mitter in a 1966 issue of Electronics Illustrated) it got me 18 states before people complained about the T4 signal. I still have my novice receiver, a Hammarlund HQ145X that I got cheap from a local guy. The high band is still squirrely, but the others are rock solid.

I moved to a Knight T-60 and worked most of the rest of the states before getting my general in early 1975 and my advanced in early 1976. I've built a lot of stuff over the years, mostly transmitters.

I've used a lot of boatanchor gear in my time. First SSB rig was a Central Electronics 10B and 455 VFO. I built a famously bad linear with sweep tubes for it that put out 500 watts on all frequencies at once. (Had a horrible problem with parasitics; I still curse the 6HF5 every night before bed.)

When I moved out of Channel 2 land I worked some 6 meters on a mint Sixer that I still have, and some other oddball gear that has mostly been sold off. I re-gathered a 6M station once I got a good shack here in Scottsdale. I use a Clegg 99er as a receiver, in a transceive lashup with an Ameco TX-62 for transmit, PTT with a home-made crystal handheld mike. I have a Gonset Comm II for 6 but its audio is intermittent.

For those in Arizona, listen to 50.4 AM every Sunday night at 7PM local time. We try to hold the 6M Junkbox Radio Net, but it's been a challenge through the summer. Things will doubtless perk up after Labor Day.

I have a handful of working 2M AM rigs including a Twoer, a Gonset Comm II, a Clegg 22er and a Poly Comm 2, but I prefer 6M for AM and have a better antenna for it.

I have a beautiful 75A4 for lowband receive, and a cosmetically perfect Central Electronics 100V that doesn't work, and I'm trying to figure out how to make it live again. That's a SCARY rig, gang. I got a pair of beat-to-hell 75M Heath Single Banders for \$10 and will fiddle with them at some point. Other rigs awaiting work are a Seneca, a Gonset 2M linear, and some solid state stuff.

I also work in solid state, and am currently co-designing a 6M NBFM receiver using Motorola PLL chips and a PIC microcontroller.

I am fascinated by the low-voltage 12V B+ tubes used briefly in car radios in the late 50s. Have an IF strip built with them followed by a transistor power audio stage, the whole thing waiting for a front end. I've built an audio power amp that'll drive a small speaker (or any headphones) with 12V tubes.

I guess I went on at length anyway. Time to lay this to rest. Summer's quiet time on the radio front, always has been. After the kids go back to school and the weather breaks some it should be better.

- --73--

- --Jeff Duntemann KG7JF  
Scottsdale, Arizona

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Date: Wed, 27 Aug 1997 19:32:13 -0400  
From: [benb27@juno.com](mailto:benb27@juno.com) (Ben C Bradley)  
Subject: Re: Permeability Tuned Receiver

On Wed, 27 Aug 1997 10:02:53 -0500 bill@skeeter.frc.com (William Hawkins) writes:

>You could also learn about the ultimate permeability tuned receivers -  
>the military R-390 family (R-388 to 392, some with A's) designed by  
>Collins.

I've certainly seen that model number in the BA list often enough, and have seen at least one picture of one on the web, so I'm at least vaguely familiar with it.

>  
>Permeability tuning was also used for car radios, probably for small  
>space and vibration considerations.

Now I remember! I took one apart when I was a teenager. The five-button AM radios had that mechanical tuning action 'memory' for the tuning buttons, and were indeed permeability tuned. It looks like permeability tuning isn't quite as rare as I thought it was.

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Date: Thu, 28 Aug 1997 00:02:41 -0500 (CDT)  
From: Stefan A Schulz <sas1757@tnitech.edu>  
Subject: Hi, my name is Stefan.

Hello to all glowbuggers out there. I was born and raised in Tullahoma, TN. I am currently a student of Molecular Biology and Biochemistry at Tennessee Tech University. My professional goals are to be able to design gene specific drugs to help eliminate genetic or hereditary disease.

My original plan was to become an electrical engineer. I was in the engineering program for about three semesters. I decided that my idea of electronics fun was tinkering and restoring not design and theory. I keep my understanding to a need to know basis.

My beginning in radio started in 1990. I was interested in Tesla coils and wanted to find anybody who knew how to build a tube driven coil using four 811A tubes! Tullahoma is the site for the "largest wind tunnel testing site in the free world". The facility is contained on an airforce base and therefore draws a lot of people from around the world. So finding an amateur electronics elmer was not hard. I found a ham who lived right down the same street from me. We talked about coils and he invited me to his house. This guy's house was a monument to military test and commo gear. Being a research engineer on an AFB and being in MARS in its heyday meant gear heaven. This where the bug bit. It chomped hard!! I completely forgot about coils and wanted to see radios that glowed. He fired up a BC-348, an R-390, and a mil DC to daylight spectrum analyzer. I got to see the signals I was hearing :) I knew then I in the right hobby. I've played with sandstate gear and found it did what it said it would, but nothing quite seems to feel and sound as good as the hollow state. I have a R-390A and a AN/GRC 109. I want to homebrew too many things but right now metabolic pathways and enzyme actions seem to pull me from my desire to play. School will provide a path to great glowbugging projects and BA's.

Hope I was not too windy,

Interests:  
regens, military radio, photography,  
and all that other related expensive stuff!

End of glowbugs V1 #98  
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[AB4EL Ham Radio Homepage @ SunSITE](http://www.4el.net)

Created by **Steve Modena, AB4EL**  
Comments and suggestions to **modena@SunSITE.unc.edu**